

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**Consolidated Environmental Management Inc**

**Consolidated Environmental Management, Inc. - Nucor Steel Louisiana**

**Convent, St. James Parish, Louisiana**

**Agency Interest Number: 157847**

**Activity Numbers: PER20080001 / PER20080002**

**Proposed Title V Permit Number: 2560-00281-V0**

**Proposed Prevention of Significant Deterioration Permit Number: PSD-LA-740**

**I. APPLICANT**

**Company:**

Consolidated Environmental Management Inc - Nucor Steel Louisiana

1915 Rexford Rd

Charlotte, North Carolina 28211

**Facility:**

Nucor Steel Louisiana

Hwy LA-3125

Convent, St. James Parish, Louisiana

Latitude 30° 5' 49", Longitude 90° 50' 38"

**II. FACILITY AND CURRENT PERMIT STATUS**

Consolidated Environmental Management, Inc.- Nucor Steel Louisiana is proposing to construct a greenfield facility initially intended for the production of pig iron. This facility will use the blast furnace process to produce high quality pig iron. Nucor plans for the mill to reach an anticipated peak annual production rate of six million metric tonnes of iron. The basic raw materials for the pig iron production process are iron ore, in lump or pellet form; coal; sinter; and flux, which may be limestone, dolomite, or electric arc furnace slag. The facility will process the coal into metallurgical-grade coke for use in the blast furnaces, at dedicated coke ovens on the site. The blast furnaces themselves are closed units with virtually no atmospheric emissions. The coke ovens follow the heat recovery design. A sinter plant will also be constructed at the site to recycle fine materials and dusts for increased raw material efficiency. By recovering heat from the coking process and combusting blast furnace gas in multiple boilers, the mill will produce enough electricity to completely provide for facility usage, and also provide some electrical export to the public utility grid.

The basic raw materials of the blast furnace process will be received by ship, barge, and rail, with additional supplies and materials being delivered by truck. Pig iron produced at the facility is stored on-site in outdoor storage piles. The iron is loaded onto trucks or rail cars and transported to the Mississippi River dock for shipment to customers by ship or barge. Coke fines from the coke handling areas will ship to customers, primarily by barge. Granulated slag and slag aggregate from the slag granulation area are shipped to customers by barge or rail. Pulverized slag from the slag

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granulation/milling area is shipped to customers, primarily by truck. FGD dust from the coke plant and the sinter plant will be shipped to a landfill, primarily by truck.

In the coke production process, coal is subjected to high heat in a battery of ovens, with the object of thermally cracking the organic compounds in the coal, leaving only pure carbon, simple carbon compounds and remaining ash in the resulting coke. During the coking process, the volatile fractions of the coal are liberated, and are collectively known as coke oven gas. The gas is ducted from the oven chamber into the refractory oven walls and sole flues beneath the chamber, where combustion of the gas is completed. Nucor will utilize a non-recovery design of coke ovens, instead of the more historically typical byproduct recovery ovens. In either design, the process of liberating the volatile fraction of the coal is done in an oxygen-deprived atmosphere. In the non-recovery oven design, the coal volatiles are oxidized within the ovens by the addition of combustion air, and incinerated by the intense heat. The heat of combustion is released within the oven system, allowing non-recovery ovens to be self-sufficient with respect to energy. Non-recovery ovens are operated at a negative pressure, which results in no system leaks around oven doors and other interfaces.

The coke production process consists of the following production steps:

- Coal Preparation: coal from the storage piles will be crushed, screened, wetted and mixed in the coal preparation area. The coal will then be pressed into the shape of a large brick by hydraulic presses. The coal bricks will then transported by a rail-mounted charging car to an oven for charging.
- Coal Charging is where a pusher machine drives the coal into the oven.
- Coke Ovens: There will be two batteries of coke ovens with each battery containing 140 ovens. A coking cycle will last approximately fifty-four hours. Heat from the hot refractory in the oven begins the carbonization of the coal, and normally no external fuel is required once the ovens have reached operating temperature. The flue gas system routes the hot gases to heat recovery steam generators (HRSGs). These HRSGs produce high-pressure steam that will be routed to the steam turbine generators.
- Coke Pushing: At the end of each coking cycle, doors on the ends of the oven are opened and the hot coke is pushed from the oven by a ram which is extended from a pusher car. A mobile, flat quench car receives the hot coke. The quench car travels by rail, carrying the coke to the coke quench tower.
- Coke Quenching: The coke from the coke oven will be positioned beneath one of the coke quench towers. There is one quench tower for each coke oven battery. At the quench tower, the hot coke is deluged with water to prevent it from burning with exposure to the air. The hot steam generated from quenching is channeled by natural draft up the quench tower. Baffles in the tower structure help to retain as much of the cooling water as possible. Cooling water from the quenching process is collected beneath the quench car, filtered, and reused.
- Coke Handling and Storage: The quenched coke is discharged onto an inclined coke wharf to allow the coke to drain and cool before a conveyor belt carries it to a crushing and screening system. The sized coke is then transported by conveyor to the Stock House for storage. Emissions from the coke screening and crushing facilities are controlled by a baghouse.

The blast furnace is a counter-current reactor in the form of a tall, shaft-type furnace where iron-bearing materials (such as iron ore and sinter) are reduced to iron (pig iron or hot metal). A typical burden feed consists of iron ore pellets, coke, sinter, and flux materials such as limestone or dolomite.

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The burden material is charged into the top of the furnace and slowly descends as hot metal is removed from the bottom. Hot metal is withdrawn from the furnace and separated into molten iron and slag in the cast house.

Blast furnace gas is collected from ducts at the top of the furnace. This gas contains a large fraction of carbon monoxide generated by the iron making reaction, as well as a sizeable fraction of hydrogen. After exiting the blast furnace, the blast furnace gas (topgas) passes through a cyclone dust catcher and dust removal system, followed by a wet scrubber system. Topgas is combusted in the hot blast stoves in order to heat the incoming blast air. Remaining topgas is burned as a fuel in power boilers to generate steam. The high pressure steam produced in the boilers will be used in steam turbines connected to electric generators. The electricity produced will likely be greater than the total site electrical requirements, and a portion may be transmitted to the public utility power grid.

Consolidated Environmental Management Inc - Nucor Steel Louisiana is a designated Part 70 source. This is the initial Part 70 Air Operating permit.

<b>Permit No.</b>	<b>Unit or Source</b>	<b>Date Issued</b>
2560-00281-V0	Nucor Steel Louisiana	Proposed
PSD-LA-740	Nucor Steel Louisiana	Proposed

### **III. PROPOSED PROJECT/PERMIT INFORMATION**

#### **Application**

A permit application was submitted on May 12, 2008 requesting a Part 70 operating permit for the Nucor Steel Louisiana facility. Additional information dated August 6, 2008, August 7, 2008, August 8, 2008, August 11, 2008, August 12, 2008, August 13, 2008, August 25, 2008, August 26, 2008, September 24, 2008 and October 1, 2008 were also received.

#### **Project**

Nucor Steel Louisiana is proposing to construct a greenfield facility dedicated to the production of pig iron. The mill will produce high-quality iron units necessary for the production of top-grade sheet steels. High-quality top-grade sheet steels cannot be made from scrap material alone. The new mill will center around the molten iron (hot metal) production of two identical blast furnaces, with an expected production rate of three million metric tonnes per year of iron for each blast furnace.

#### **Proposed Permit**

Permit 2560-00281-V0 will be the initial Part 70 operating permit for the Nucor Steel Louisiana facility. Permit No. PSD-LA-740 will be the Prevention of Significant Deterioration Permit for the Nucor Steel Louisiana facility.

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**Permitted Air Emissions**

Estimated emissions in tons per year are as follows:

Pollutant	Emissions (TPY)
PM <sub>10</sub>	1,627.05
SO <sub>2</sub>	5,009.74
NO <sub>X</sub>	4,049.88
CO	29,406.15
VOC	403.14

**LAC 33:III Chapter 51 Metallic Toxic Air Pollutants (TAPs):**

Pollutant	Emissions (TPY)
Antimony & Compounds	0.012
Arsenic & Compounds	0.124
Barium & Compounds	0.034
Beryllium & Compounds	0.003
Cadmium & Compounds	0.11
Chromium VI & Compounds	0.066
Cobalt & Compounds	< 0.01
Copper & Compounds	0.260
Lead & Compounds	0.375
Manganese & Compounds	0.044
Mercury & Compounds	0.260
Nickel & Compounds	0.094
Selenium & Compounds	0.028
Silver & Compounds	< 0.01
Zinc & Compounds	2.448

**LAC 33:III Chapter 51 Volatile Organic Compounds TAPs:**

Pollutant	Emissions (TPY)
Acetonitrile	0.16
Acrolein	0.18
Acrylonitrile	0.79
Benzene	56.05
Bromomethane (Methyl Bromide)	0.99
Bromoform	< 0.01
Chlorobenzene	< 0.01
Chloroform	0.03
Chloromethane (Methyl Chloride)	1.36

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Pollutant	Emissions (TPY)
Cumene	< 0.01
Cyanide	1.11
1,4-Dioxane	0.28
Dioxins/Furans	< 0.001
Ethyl Benzene	< 0.01
n-Hexane	0.03
Methanol	0.14
Methyl-ethyl-ketone (2-Butanone)	0.34
Methyl-isobutyl ketone (4-Methyl-2-Pentanone)	0.31
Methyl Tert-Butyl Ether (MTBE)	< 0.01
Methylene Chloride (Dichloromethane)	1.32
Methyl Methacrylate	0.31
Naphthalene	0.52
PAHs (Polynuclear Aromatic Hydrocarbons)	5.21
Phenol	11.73
Styrene	0.10
1,1,2,2-Tetrachloroethane	0.14
Toluene	1.02
1,1,1-Trichloroethane	< 0.01
1,1,2-Trichloroethane	< 0.01
Vinyl Acetate	0.28
Xylene	0.04
 <u>LAC 33:III Chapter 51 Other TAPs:</u>	
Ammonia	20.69
Carbon Disulfide	0.03
Hydrochloric Acid	0.13
Hydrofluoric Acid	0.07
Total TAPs (Metallic, VOC and Other)	107.22

#### IV REGULATORY ANALYSIS

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, Prevention of Significant Deterioration (PSD), New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP).

A BACT analysis was performed and can be found in PSD Permit PSD-LA-740.

Many of the sources located at this proposed facility will be subject to either NSPS or NESHAP regulations. Portions of the coal receiving and processing for the Coke Oven Batteries are subject to NSPS Subpart Y. Sources associated with the Coke Oven Batteries are subject to NESHAP L. Additional operations associated with the Coke Oven Batteries are subject to NESHAP CCCCC. This includes the Coal Charging, Coke Pushing, and the Coke Quenching operations. Sinter Operations are subject to NESHAP FFFFF.

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The various operations are designed to maximize the collection of exhaust materials for reuse within the plants operations. This includes collecting fine and processing them in the Sinter plant for reuse within the plant or for export to other types of commercial operations. Blast furnace exhaust gases will be collected and combusted to produce electricity for internal use.

By letter dated July 25, 2008, Nucor Corporation on behalf of its subsidiary Consolidated Environmental Management Inc. requested a determination that the proposed Nucor Steel Louisiana's coke oven charging and pushing arrangements will comply with the requirements for 40 CFR 63 Subpart L and CCCCC.

Upon review of the information supplied in the request, the regulatory language and associated NESHAP preambles and additional information made available to the Department, LDEQ has determined that the coke charging and pushing arrangements will be capable of complying with the requirements of 40 CFR 63 Subpart L and CCCCC.

One exception to compliance was found. BACT was determined to be Compacted Coal as an Inherently Lower Polluting Process or Practice, as described in Section IV.A.3 of USEPA's New Source Review Workshop Manual published in October, 1990. Therefore a Permit Shield will be granted that compliance with the emission limitation requirement shall not be determined by the procedures in 40 CFR 63.309(k). This requires the facility to conduct a performance test of the charging operation using 40 CFR 60 Appendix A, Methods 1 through 5. These tests require a ventilation stack, which will not exist at the Nucor facility. Compliance shall be determined with other applicable procedures described in 40 CFR 63.309(a) through (m), and 40 CFR 63.7300(a).

One requirement from Subpart CCCCC is as follows: "Make monthly inspections of capture systems according to 40 CFR 63.7300(c)(1) and record all information needed to document conformance with these requirements. Subpart CCCCC §7335(b)(1)". This requirement shall be modified to include the additional identified requirement: "BACT has been determined that the 'capture system' is compacted coal pushed onto a traveling flat car. Inspections shall include visual observations of the pushed coke to ensure that the compacting system allows the pushed coke to retain its cohesive mass."

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**Applicability and Exemptions of Selected Subject Items**

**Explanation for Exemption Status or Non-Applicability of a Source**

ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
	40 CFR 60 Subpart N - Standards Of Performance For Primary Emissions From Basic Oxygen Process Furnaces For Which Construction Is Commenced After June 11, 1973	Does Not Apply	The affected facility to which the provisions of this subpart apply is each basic oxygen process furnace. The facility will not construct a basic oxygen process furnace.	LAC 33:III.5911.A, 40 CFR 68.3
Nucor Steel Louisiana UNF 1	40 CFR 60 Subpart Na - Of Performance For Secondary Emissions From BOP Steelmaking Facilities For Which Construction Is Commenced After January 20, 1983	Does Not Apply	The provisions of this subpart apply to the following affected facilities in an iron and steel plant: top-blown BOPFs and hot metal transfer stations and skimming stations used with bottom-blown or top-blown BOPFs. The facility will not construct a BOPF.	40 CFR 60.140(a)
	40 CFR 60 Subpart Z - Standards Of Performance For Ferroalloy Production Facilities	Does Not Apply	Applies to the following affected facilities: Electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust-handling equipment. This facility will not include electric submerged arc furnaces producing these materials.	40 CFR 60.260(a)

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**Explanation for Exemption Status or Non-Applicability of a Source**

ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
	40 CFR 60 Subpart AA - Standards Of Performance For Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 And On Or Before August 17, 1983	Does Not Apply	Applies to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces and dust-handling systems. This facility will not qualify as a steel plant producing carbon, alloy, or specialty steels.	40 CFR 60.270(a)
Nucor Steel Louisiana	40 CFR 60 Subpart AAa - Standards Of Performance For Steel Plants: Electric Arc Furnaces And Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983	Does Not Apply	Applies to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems. This facility will not qualify as a steel plant producing carbon, alloy, or specialty steels.	40 CFR 60.270(a)
UNF 1	40 CFR 60 Subpart LL - Standards Of Performance For Metallic Mineral Processing Plants	Does Not Apply	Applies to the following affected facilities in metallic mineral processing plants: Each crusher and screen in open-pit mines; each crusher, screen, bucket elevator, conveyor or belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, and railcar unloading station at the mill or concentrator with the following exceptions. Metallic mineral processing commences with the mining of ore and includes all operations either up to and including the loading of wet or dry concentrates or solutions of metallic minerals for transfer to facilities at non-adjacent locations that will subsequently process metallic concentrates into purified metals. The facility will not qualify as a metallic mineral processing plant.	40 CFR 60.380(a)

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
	40 CFR 60 Subpart OOO - Standards Of Performance For Nonmetallic Mineral Processing Plants	Does Not Apply	Applies to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. This facility will not process nonmetallic minerals.	40 CFR 60.670(a)(1)
Nucor Steel Louisiana	40 CFR 60 Subpart UUU - Standards Of Performance For Calciners And Dryers In Mineral Industries	Does Not Apply	Applies to each calciner and dryer at a mineral processing plant. This facility will not meet the definition of a mineral processing plant.	40 CFR 60.730(a)
UNF 1	LAC 33:III Chapter 15 - Emission Standards for Sulfur Dioxide	Exempt	Single point sources that emit or have the potential to emit less than 250 tons per year of sulfur compounds measured as sulfur dioxide may be exempted from the 2,000 ppm(v) limitation by the administrative authority. The owner or operator of any emissions unit that is not subject to the emissions limitations of this Chapter shall record and retain at the site sufficient data to show annual potential sulfur dioxide emissions from the emissions unit.	LAC 33:III.1503.C, LAC 33:III.1515.C
Slag Granulation Tanks	LAC 33:III.2103 - Volatile Organic Compounds - Storage of VOC's	Does Not Apply	This tank will not be used to store volatile organic compounds.	LAC 33:III.2103.A, B
	SLG-101, SLG-102, SLG-201, SLG-202 (EQT036-039)			

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
Slag Granulation Tanks SLG-101, SLG-102, SLG-201, SLG-202 (EQT036-039)	40 CFR 60 Subpart Kb - New Source Performance Standards For Volatile Liquid Storage Vessels (Including Petroleum Storage Vessels) For Which Construction, Reconstruction or Modification Commenced After July 23, 1984	Does Not Apply	This Subpart applies to vessels storing volatile organic liquids with a capacity greater than 75 m <sup>3</sup> . The slag granulation tanks will not store volatile organic liquids.	40 CFR 60.111(b)
LAC 33:III Chapter 15 - Emission Standards for Sulfur Dioxide	Exempt	Single point sources that emit or have the potential to emit less than 250 tons per year of sulfur compounds measured as sulfur dioxide may be exempted from the 2,000 ppm(v) limitation by the administrative authority. The owner or operator of any emissions unit that is not subject to the emissions limitations of this Chapter shall record and retain at the site sufficient data to show annual potential sulfur dioxide emissions from the emissions unit.	LAC 33:III.1503.C, LAC 33:III.1515.C	
Slag Pits SLG-104, SLG-105, SLG-106, SLG-204, SLG-205, SLG-206 (ARE005-010)	LAC 33:III.1313 - Emissions from Fuel Burning Equipment	Exempt	Applies to any operation, process, or activity from which particulate matter is emitted except the wood pulping industry, the primary aluminum industry (horizontal stud Soderberg and prebake processes), and the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials. The dryers will be used for the burning of fuel for indirect heating as described above, and are therefore exempt.	LAC 33:III.1313.B

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
Slag Mill Dyer SLG-402 (RLP014)	40 CFR 63 Subpart CCCCC - National Emission Standards For Hazardous Air Pollutants For Coke Ovens: Pushing, Quenching and Battery Stacks	Does Not Apply	This Subpart does apply to Coke Oven Pushing operations, but not to Coke Oven Charging operations.	40 CFR 63.7282(b)
Coke Charging COK-101, COK-201 (EQT001,007)	LAC 33:III Chapter 15 - Emission Standards for Sulfur Dioxide	Exempt	Single point sources that emit or have the potential to emit less than 250 tons per year of sulfur compounds measured as sulfur dioxide may be exempted from the 2,000 ppm(v) limitation by the administrative authority. The owner or operator of any emissions unit that is not subject to the emissions limitations of this Chapter shall record and retain at the site sufficient data to show annual potential sulfur dioxide emissions from the emissions unit.	LAC 33:III.1503.C, LAC 33:III.1515.C
Coke Pushing COK-102, COK-202 (EQT002,008)	40 CFR 63 Subpart L - National Emission Standards for Coke Oven Batteries	Does Not Apply	This Subpart does not apply to Coke Oven Battery quenching operations.	40 CFR 64.300 and 301
Coke Quenching COK-103, COK-203 (EQT003,009)	40 CFR 60 Subpart D - Standards Of Performance For Fossil Fuel Fired Steam Generators For Which Construction Is Commenced After August 17, 1971	Does Not Apply	Applies to fossil fuel fired and wood residue fired steam generators constructed or modified after August 17, 1971. The Heat Recovery Steam Generators will not be supplementally fired with any fuels.	40 CFR 60.40(a)

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
	40 CFR 60 Subpart Da - Standards Of Performance For Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978	Does Not Apply	Applies to each electric utility steam generating unit: (1) That is capable of combusting more than 250 MMBlu/hr heat input of fossil fuel; and (2) For which construction, modification, or reconstruction is commenced after September 18, 1978. The Heat Recovery Steam Generators will not be supplementally fired with fossil fuels.	40 CFR 60.40(a)
Coke Battery 1 & 2 HRSG Bypass Stacks	40 CFR 60 Subpart Db - Standards Of Performance For Industrial-Commercial-Institutional Steam Generating Units	Does Not Apply,	Applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBlu/hr. The Heat Recovery Steam Generators will not be supplementally fired with fossil fuels other than for initial startup.	40 CFR 60.40(b)(a)
COK-105,- COK-109,- COK-205,- COK-209 (RLP001-005, RLP007-011)	40 CFR 60 Subpart Dc - Standards Of Performance For Small Industrial-Commercial-Institutional Steam Generating Units	Does Not Apply	Applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBlu/hr or less, but greater than or equal to 10 MMBlu/hr. The Heat Recovery Steam Generators will not be supplementally fired with fossil fuels other than for initial startup. (see definition of steam generating unit).	40 CFR 60.40(c)(a)
LAC 33:III, Chapter 51	40 CFR 63 Subpart CCCCC - National Emission Standards For Hazardous Air Pollutants For Coke Ovens: Pushing, Quenching and Battery Stacks	Does Not Apply	Applies to opacity emissions from battery stacks at byproduct recovery coke ovens. The coke oven batteries are of the non-recovery oven design, and therefore these limitations do not apply.	40 CFR 63.7296
			LAC 33:III.5105.B.3.b exempts emissions from the combustion of Group 2 virgin fossil fuels vented from a stack that has downwash minimization stack height.	40 CFR 60.40(a)

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Coke Battery 1 & 2 HRSG Bypass Stacks COK-105, - COK-109, - COK-205, - COK-209 (RLP001-005, - RLP007-011)	LAC 33:III.1311.B	Exempt	Where the administrative authority finds that by reason of exceptional circumstances strict conformity with any provisions of these regulations would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the administrative authority may permit a variance from these regulations. The BACT Analysis provided justification to grant this variance.	LAC 33:III.1311.G
	LAC 33:III Chapter 15 - Emission Standards for Sulfur Dioxide	Exempt	Single point sources that emit or have the potential to emit less than 250 tons per year-of sulfur compounds measured as sulfur dioxide may be exempted from the 2,000 ppm(v) limitation by the administrative authority. The owner or operator of any emissions unit that is not subject to the emissions limitations of this Chapter shall record and retain at the site sufficient data to show annual potential sulfur dioxide emissions from the emissions unit.	LAC 33:III.1503.C, LAC 33:III.1515.C
Pulverized Coal Injection Mill Hot Gas Generator and Baghouse Vent (PCI-101)	LAC 33:III.1311.C - Emissions from Fuel Burning Equipment	Exempt		LAC 33:III.1301.B

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
LAC 33:III.2115 - Waste Gas Disposal	Does Not Apply	Applies to emissions to the atmosphere of waste gas streams containing VOC. Process gas streams that are used as primary fuels are excluded from the definition of a waste gas stream.		LAC 33:III.2115.M
40 CFR 60 Subpart D - Standards Of Performance For Fossil Fuel Fired Steam Generators For Which Construction Is Commenced After August 17, 1971  (PWR-101, through PWR-108 (EQT023-030))	Does Not Apply	Applies to fossil fuel fired and wood residue fired steam generators constructed or modified after August 17, 1971. The boilers will not meet this definition.		40 CFR 60.40(a)
40 CFR 60 Subpart D - Standards Of Performance For Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978	Does Not Apply	Applies to each electric utility steam generating unit: (1) That is capable of combusting more than 250 MMBtu/hr heat input of fossil fuel; and (2) For which construction, modification, or reconstruction is commenced after September 18, 1978. The boilers will not meet this definition.		40 CFR 60.40(a)
40 CFR 60 Subpart Dc - Standards Of Performance For Small Industrial-Commercial-Institutional Steam Generating Units	Does Not Apply	Applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 1.0 MMBtu/hr. The Heat Recovery Steam Generators capacity does not meet this definition.		40 CFR 60.40(c)(1)
LAC 33:III.2115 - Waste Gas Disposal	Does Not Apply	Applies to emissions to the atmosphere of waste gas streams containing VOC. Process gas streams that are used as primary fuels are excluded from the definition of a waste gas stream.		LAC 33:III.2115.M

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
40 CFR 60 Subpart D - Standards Of Performance For Fossil-Fuel Fired Steam Generators For Which Construction Is Commenced After August 17, 1971	Does Not Apply		Applies to fossil fuel fired and wood residue fired steam generators constructed or modified after August 17, 1971. The blast furnace stoves will not be used to generate steam.	40 CFR 60.40(a)
40 CFR 60 Subpart Da - Standards Of Performance For Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978	Does Not Apply		Applies to each electric utility steam generating unit: (1) That is capable of combusting more than 250 MMBtu/hr heat input of fossil fuel; and (2) For which construction, modification, or reconstruction is commenced after September 18, 1978. The blast furnace stoves will not be used to generate steam.	40 CFR 60.40(a)
40 CFR 60 Subpart Db - Standards Of Performance For Industrial-Commercial-Institutional Steam Generating Units	Does Not Apply		Applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBtu/hr. The blast furnace stoves will not be used to generate steam.	40 CFR 60.40(b)(a)
40 CFR 60 Subpart Dc - Standards Of Performance For Small Industrial-Commercial-Institutional Steam Generating Units	Does Not Apply		Applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 1.0 MMBtu/hr. The Heat Recovery Steam Generators will not be supplementally fired with fossil fuels.	40 CFR 60.40(c)(a)
40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants	Does Not Apply		This Subpart applies to coal storage systems. Open storage piles are explicitly exempted from the definition of a coal storage system.	40 CFR 60.251(h)

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**Explanation for Exemption Status or Non-Applicability of a Source**

ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
Coal Storage Piles PII-101 (FUG001)	40 CFR 63 Subpart Q - National Emission Standards For Hazardous Air Pollutants For Industrial Process Cooling Towers	Does Not Apply	Applies to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources or are integral parts of facilities that are major sources. The planned cooling towers will not be operated with chromium-based water treating chemicals.	40 CFR 63.400(a)
Cooling Towers TWR-101, TWR-102, TWR-103 (EQT060-062)	40 CFR 60 Subpart Kb - New Source Performance Standards For Volatile Liquid Storage Vessels (Including Petroleum Storage Vessels) For Which Construction, Reconstruction or Modification Commenced After July 23, 1984	Does Not Apply	This Subpart applies to vessels storing volatile organic liquids with a capacity greater than 75 m <sup>3</sup> . TNK-101 will not exceed 75 m <sup>3</sup> in size.	40 CFR 60.110b
Gasoline Storage Tank TNK-101 (EQT1057)	40 CFR 60 Subpart Kb - New Source Performance Standards For Volatile Liquid Storage Vessels (Including Petroleum Storage Vessels) For Which Construction, Reconstruction or Modification Commenced After July 23, 1984	Does Not Apply	This Subpart applies to vessels storing volatile organic liquids with a capacity greater than 75 m <sup>3</sup> . TNK-101 will not exceed 75 m <sup>3</sup> in size.	40 CFR 60.110b
Diesel Storage Tank TNK-102 (EQT058)	LAC 33:III.2 03 - Volatile Organic Compounds - Storage of Volatile Organic Compounds	Does Not Apply	This rule applies to storage vessels containing volatile organic liquids having a vapor pressure of 1.5 psia or greater. Diesel does not meet this vapor pressure threshold.	LAC 33:III.2 03.A

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ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
Diesel Storage Tank TNK-102 (EQT058)	40 CFR 60 Subpart Kb - New Source Performance Standards For Volatile Liquid Storage Vessels (Including Petroleum Storage Vessels) For Which Construction, Reconstruction or Modification Commenced After July 23, 1984	Does Not Apply	This Subpart applies to vessels storing volatile organic liquids with a capacity greater than 75 m <sup>3</sup> . TNK-101 will not exceed 75 m <sup>3</sup> in size.	40 CFR 60.110b

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**Prevention of Significant Deterioration/Nonattainment Review**

Nucor Steel Louisiana is proposing to construct a greenfield facility dedicated to the production of pig iron. The mill will produce high-quality iron units necessary for the production of top-grade sheet steels. High-quality top-grade sheet steels cannot be made from scrap material alone. The new mill will center around the molten iron (hot metal) production of two identical blast furnaces, with an expected production rate of three million metric tons per year of pig iron for each blast furnace.

Estimated emissions in tons per year are as follows:

Pollutant	PSD Significant Emission Rate (TPY)	Proposed Emission Rate (TPY)	Significant Source
Particulate Matter < 10µm (PM <sub>10</sub> )	15	1,627.05	Yes
Sulfur Dioxide (SO <sub>2</sub> )	40	5,009.74	Yes
Nitrogen Oxides (NO <sub>x</sub> )	40	4,049.88	Yes
Carbon Monoxide (CO)	100	29,406.15	Yes
Volatile Organic Compounds (VOC)	40	403.14	Yes
Lead (Pb)	0.6	0.375	No

PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, and VOC emissions are above PSD significant emissions levels and must undergo PSD analysis. Control of PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, and VOC emissions were analyzed using a "top down" approach.

**Summary of Proposed BACT:**

Unit	Unit Identifiers	PM <sub>10</sub> BACT	NO <sub>x</sub> BACT	SO <sub>2</sub> BACT	CO BACT	VOC BACT
Blast Furnace / Hot Blast Stoves	STV-101, 102	Fuel gas cleaning with cyclone and wet scrubber	Low-NO <sub>x</sub> fuel combustion	No feasible control technology for Blast Furnace Gas. (BFG) Limit Nat. Gas sulfur content	Good combustion practices	Good combustion practices
Cast House	CST-101, 201	Local collection hoods and fabric filter		No feasible control technology	No feasible control technology	
Coke Oven Gas	COK-111, 211	Fabric filter	Staged combustion	Low Sulfur Coal, Lime spray drying scrubber	Good combustion practices	Good combustion practices
Blast Furnace & Coke Oven	PCI-101 COK-100, 104,	Fabric filter, water suppression and				

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Unit	Unit Identifiers	PM <sub>10</sub> BACT	NO <sub>x</sub> BACT	SO <sub>2</sub> BACT	CO BACT	VOC BACT
Coal Prep.	204	enclosed conveyors				
Coke Oven Charging	COK-101, 201	Compacted coal, negative pressure ovens				
Coke Oven Pushing	COK-102, 202	Flat car pushing	Compacted coal and flat car pushing	Compacted coal and flat car pushing	Compacted coal and flat car pushing	Compacted coal and flat car pushing
Coke Quenching	COK-103, 203	Quench Tower Baffles and Low-TDS Water				
Slag Granulation	SLG-101, 102, 201, 202, 301, 306, 401	Water suppression of dust generating sources				
Slag Milling / Processing	SLG-302, 303, 304, 305, 402, 403, 404, 406, 407, 408, 409	Fabric filters				
Diverted Air-Cooled Slag	SLG-104, 105, 106, 204, 205, 206	Wet suppression of dust generating sources				
Topgas Boilers	PWR-101- 108	Fuel cleaning with cyclone and wet scrubber	Low-NO <sub>x</sub> fuel combustion	No feasible control technology for BFG Limit Nat. Gas sulfur content	Good combustion practices	Good combustion practices
Sinter Plant	SIN-101, 102	Collection systems and fabric filter	No feasible control technology	Lime spray drying scrubber	Good combustion practices	Counterflow injection of additives
Cooling Towers	TWR-101, 102, 103	Cellular drift eliminators and low TDS cooling water				
Storage Piles	PIL-101, 102, 103, 104, 105, 106, 107, 108	Wet suppression of dust generating sources. Paved				

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Unit	Unit Identifiers	PM <sub>10</sub> BACT	NO <sub>x</sub> BACT	SO <sub>2</sub> BACT	CO BACT	VOC BACT
Road Dust	FUG-101, 102	roads where practicable and reduced speed limit				
Hot Metal Handling	PIG-101, 102	Collection hood and fabric filter				
Stock House; Sinter Material Handling	SIN-103, 105, 106; STC-101, 201	Fabric filters				
Material Handling and Transfer	COK-112, 113, 212, 213, 214, 215; DOC-101, 102; DST-101, 201; FUG-103; TRN-101	Enclosed conveyors and water suppression				

Summary of proposed BACT limits and conditions.

1. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary" dated September 25, 2008 and subject to the following emissions limitations and other specified conditions. Specifications submitted are contained in the application and Emission Inventory Questionnaire dated May 12, 2008, along with supplemental information dated June 11, 2008 and July 16, 2008.

**MAXIMUM ALLOWABLE EMISSIONS RATES**

Unit	ID No.	Description		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Blast Furnace / Hot Blast Stoves	RLP015	STV-101-Blast Furnace 1 Hot Blast Stoves Common Stack	lb/MM Btu BFG gr/dscf Nat. Gas gr/MMscf Specific Condition #	0.002	0:039 2500 # 2, # 3	0.06	0.0824	0.0054 # 4 # 4
	RLP016	STV-201-Blast Furnace 2 Hot Blast Stoves Common Stack						
Cast House	EQT015	CST-101- Cast House 1 Baghouse Vent	gr/dscf lbs/ton hot metal	0.003 0.013	0.04	0.055		
	EQT016	CST-201- Cast House 2 Baghouse Vent						

<sup>1</sup>NESHAP Limit

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Unit	ID No.	Description		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Coke Oven Gas	RLP006 RLP012	COK-111-Coke Battery 1 Flue Gas Desulfurization Stack COK-211-Coke Battery 2 Flue Gas Desulfurization Stack	lbs/ton wet coal charged Specific Condition #	0.0172 6 # 2, # 3		0.71	0.06	0.0035
Blast Furnace and Coke Oven Coal Preparation	RLP013A RE001 EQT004 EQT010	PCI-101 - PCI Mill Vent COK-100 - Coke Ovens Coal Handling, Crushing, and Compacting COK-104 - Coke Battery 1 Coke Handling COK-204 - Coke Battery 2 Coke Handling	Specific Condition #	# 12				
Coke Oven Charging	EQT001 EQT007	COK-101 - Coke Battery 1 Coal Charging COK-201 - Coke Battery 2 Coal Charging	lbs/ton dry coal charged	0.0081 <sup>2</sup>				
Coke Oven Pushing	EQT002 EQT008	COK-102 - Coke Battery 1 Coal Pushing COK-202 - Coke Battery 2 Coal Pushing	lbs/ton coke pushed Specific Condition #	0.04 <sup>3</sup> # 5	0.098 # 5	0.019 # 5	0.0638 # 5	0.077 # 5
Coke Quenching	EQT003 EQT009	COK-103 - Coke Battery 1 Coke Quench Tower COK-203 - Coke Battery 2 Coke Quench Tower	Milligrams/liter TDS	≤1100 4				
Slag Granulation & Slag Milling	EQT036	SLG-101 - Slag Granulator 1 Granulation Tank 1	Specific Condition #	# 6				
	EQT037	SLG-102 - Slag Granulator 1 Granulation Tank 2	Specific Condition #	# 6				
	EQT038	SLG-201 - Slag Granulator 2 Granulation Tank 1	Specific Condition #	# 6				
	EQT039	SLG-202 - Slag Granulator 2 Granulation Tank 2	Specific Condition #	# 6				
	EQT040	SLG-301 - Air-Cooled Slag Processing Load Bin	Specific Condition #	# 6				
	EQT041	SLG-302 - Air-Cooled Slag Processing Primary Crusher	Specific Condition #	# 6				
Slag	EQT042 EQT043	SLG-303 - Air-Cooled Slag Processing Primary Screening SLG-304 - Air-Cooled Slag	Specific Condition #	# 6				

<sup>2</sup> LDEQ has determined that compacted coal charging technology will meet the MACT emission limitation of 0.0081lb/ton of dry coal charged, required under 40 CFR 63.303(d)(2).

<sup>3</sup> LDEQ has determined that flat car pushing technology will meet the MACT emission limitation of 0.04 lb of filterable PM<sub>10</sub> per ton of coke pushed required under 40 CFR 63.7290.

<sup>4</sup> This technology will meet the MACT emission limitation of ≤ 1,100 milligrams per liter TDS concentration, required under 40 CFR 63.7295(a)(1)(i).

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Unit	ID No.	Description		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
<b>Granulation &amp; Slag Milling</b>		Processing Secondary Crusher						
	EQT044	SLG-305 - Air-Cooled Slag Processing Secondary Screen	Specific Condition #	# 6				
	ARE011	SLG-306 - Air-Cooled Slag Processing Stockpiles	Specific Condition #	# 6				
	EQT045	SLG-401-Slag Mill Wet Slag Feed Bin	Specific Condition #	# 6				
	RLP014	SLG-402 - Slag Mill Dryer Stack	Specific Condition #	# 7				
	EQT046	SLG-403 - Slag Mill Dryer Baghouse Vent	Specific Condition #	# 7				
	EQT047	SLG-404 - Slag Mill Dry Slag Feed Bin Baghouse Vent	Specific Condition #	# 7				
	EQT048	SLG-405 - Slag Mill Crushers/Screeners Baghouse Vent	Specific Condition #	# 7				
	EQT049	SLG-406 - Slag Mill Building Baghouse Vent	Specific Condition #	# 7				
	EQT050	SLG-407 - Slag Mill Transfer Points Baghouse Vent	Specific Condition #	# 7				
<b>Blast Furnace Slag Pits</b>	ARE005	SLG-104 - Blast Furnace 1 Slag Pit 1	Specific Condition #	# 8				
	ARE006	SLG-105 - Blast Furnace 1 Slag Pit 2						
	ARE007	SLG-106 - Blast Furnace 1 Slag Pit 3						
	ARE008	SLG-204 - Blast Furnace 2 Slag Pit 1						
	ARE009	SLG-205 - Blast Furnace 2 Slag Pit 2						
	ARE010	SLG-206 - Blast Furnace 2 Slag Pit 3						
<b>Topgas Boilers</b>	EQT023	PWR-101 - Topgas Boiler No. 1	gr/dscf lb/MM Btu	0.002	0.092	0.0824	0.0054	# 4
	EQT024	PWR-102 - Topgas Boiler No. 2						
	EQT025	PWR-103 - Topgas Boiler No. 3						
	EQT026	PWR-104 - Topgas Boiler No. 4						
	EQT027	PWR-105 - Topgas Boiler No. 5						
	EQT028	PWR-106 - Topgas Boiler No. 6						
	EQT029	PWR-107 - Topgas Boiler No. 7						
	EQT030	PWR-108 - Topgas Boiler No. 8						

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Unit	ID No.	Description		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Sinter Plant	EQT031	SIN-101 - MEROS System Vent Stack	lbs/ton finished sinter gr/dscf	0.3 <sup>5</sup> 0.002	0.437	0.495	17.942	0.1074
	EQT032	SIN-102 - Sinter Plant Main Dedusting Baghouse Vent	lbs/ton finished sinter gr/dscf gr/dscf	0.0036 0.005 0.01 <sup>6</sup>				
Cooling Towers	EQT060	TWR-101 - Blast Furnace Cooling Tower	milligrams/liter TDS	<1100				
	EQT061	TWR-102 - Iron Solidification Cooling Tower	Specific Condition #	# 9				
	EQT062	TWR-103 - Air Separation Plant Cooling Tower						
Storage Piles	FUG001	PIL-101 - Coal Storage Piles						
	FUG002	PIL-102 - Iron Ore Pellet Storage Piles						
	FUG003	PIL-103 - Flux Storage Piles						
	FUG004	PIL-104 - Pig Iron Storage Piles						
	FUG005	PIL-105 - Granulated Slag Storage Piles						
	FUG006	PIL-106 - Sinter Storage Piles						
	FUG007	PIL-107 - Coke Breeze Storage Piles						
	FUG008	PIL-108 - Mill Scale Storage Piles	Specific Condition #	# 10				
	ARE002	FUG-101 - Unpaved Road Fugitive Dust						
	ARE003	FUG-102 - Paved Road Fugitive Dust	Specific Condition #	# 11				
Hot Metal Handling	EQT021	PIG-101 - Pig Iron Desulfurization Station Baghouse Vent	lbs/ton hot metal processed	0.009				
	EQT022	PIG-102 - Pig Iron Solidification Baghouse Vent	lbs/ton hot metal processed	0.0019				
Stock House; Sinter Material Handling	EQT033E	SIN-103 - Coke and Petcoke Crushing Dedusting Baghouse Vent						
	QT034	SIN-105 - Sinter FGD Lime Silo Unloading						
	EQT035	SIN-106 - Sinter FGD Waste Loading	Specific Condition #	# 12				
	EQT053	STC-101 - Stock House 1 Baghouse Vent						
	EQT054	STC-201 - Stock House 2 Baghouse Vent						

<sup>5</sup>This emission rate is the MACT emission limitation of 0.3 lb/ton of product sinter, required under 40 CFR 63.7790(a).

<sup>6</sup>This is the MACT emission limitation for the discharge end and sinter cooler at a new sinter plant, required under 40 CFR 63.7790(a).

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Unit	ID No.	Description		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Material Handling and Transfer	EQT017	DOC-101 - Dock 1	Specific Condition #	# 13				
	EQT018	Loading/Unloading Gantry Crane						
	EQT019	DOC-102 - Dock 2						
	EQT020	Loading/Unloading Gantry Crane						
	ARE004	DST-101-Blast Furnace 1 Topgas						
	EQT059	Dust Catcher						
		DST-201-Blast Furnace 2 Topgas						
Material Handling and Transfer		Dust Catcher	Specific Condition #	# 12				
	EQT005	FUG-103 - Conveyor Fugitives						
	EQT006	TRN-101 - Wagon Tipper						
	EQT011	COK-112 - Coke Battery 1 FGD						
	EQT012	Lime Silo Unloading						
	EQT013	COK-113 - Coke Battery 1 FGD						
	EQT014	Waste Loading						

2. BACT is also selected as a maximum content of 1.3% sulfur in the coal.
3. BACT for SO<sub>2</sub> from natural gas combustion is to purchase natural gas containing no more than 2500 gr of Sulfur per MM scf for the Blast Furnace / Hot Blast Stoves/ Top Gas Boilers.
4. BACT for CO and VOC is selected to be good combustion practices during the operation of the Blast Furnace / Hot Blast Stoves/ Top Gas Boilers.
5. BACT is selected to be compacted coal and flat car pushing, which represents an Inherently Lower Polluting Process.
6. BACT is selected to be wet suppression of dust generating sources (slag granulation) by water sprays. This technology is inherent to the granulated slag process.
7. BACT for the granulated slag milling process is selected as collection and control by fabric filters.
8. BACT is determined to be wet suppression of dust generating sources by water sprays at the slag pits after air cooling and prior to removal by a mechanical loader.
9. BACT is selected to be a combination of less than 1,100 milligrams per liter TDS concentration in the cooling water and drift eliminators employing a drift maximum of 0.0005%.

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10. BACT is selected to be implementation of wet suppression of dust generating sources by water sprays at each storage pile site. Roadways shall be sprayed to reduce emissions.
11. BACT for road dust is selected as paving where practicable, and roadway watering and reduced speed limit on unpaved roads.
12. BACT is selected as collection and control by fabric filters.
13. BACT is selected to be enclosed conveyors as the most stringent control option for material handling conveyors. Water sprays and partial enclosures are additional control methods which will be employed at specific and drop points. BACT for the various loading and unloading operations and similar sources is selected as collection and control by fabric filters.

**Streamlined Equipment Leak Monitoring Program**

The facility has no programs being streamlined.

**MACT Requirements**

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. Compliance with 40 CFR 63 Subparts L, CCCCC and FFFFF have been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

A review of the current and proposed NESHAP regulations found that the facility is subject to Subpart L, Subpart CCCCC, and Subpart FFFFF. Upon review of the information supplied by Nucor, the regulatory language and associated NESHAP preambles and additional information made available to the Department, LDEQ has determined that the coke charging and pushing arrangements will be capable of complying with the requirements of 40 CFR 63 Subpart L and CCCCC. LDEQ has determined that the sinter plant operations will be capable of complying with the requirements of 40 CFR 63 Subpart FFFFF.

One exception to compliance was found. BACT was determined to be Compacted Coal as an Inherently Lower Polluting Process or Practice, as described in Section IV.A.3 of USEPA's New Source Review Workshop Manual published in October, 1990. Therefore a Permit Shield will be granted that compliance with the emission limitation requirement shall not be determined by the procedures in 40 CFR 63.309(k). This requires the facility to conduct a performance test of the charging operation using 40 CFR 60 Appendix A, Methods 1 through 5. These tests require a ventilation stack, which will not exist at the Nucor facility. Compliance shall be determined with other applicable procedures described in 40 CFR 63.309(a) through (m), and 40 CFR 63.7300(a).

One requirement from Subpart CCCCC is as follows: "Make monthly inspections of capture systems according to 40 CFR 63.7300(c)(1) and record all information needed to document conformance with

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these requirements. Subpart CCCCC §7335(b)(1)". This requirement was modified to include the additional identified requirement: "BACT has been determined that the 'capture system' is compacted coal pushed onto a traveling flat car. Inspections shall include visual observations of the pushed coke to ensure that the compacting system allows the pushed coke to retain its cohesive mass."

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

#### Air Quality Analysis

Air quality modeling was performed for PM<sub>10</sub>, CO, SO<sub>2</sub>, and NO<sub>x</sub> in order to determine compliance with the National Ambient Air Quality Standards (NAAQS) and the Class II PSD Increment. Modeling results showed compliance with all applicable standards for PM<sub>10</sub>, CO, SO<sub>2</sub>, and NO<sub>x</sub>.

Pollutant	Averaging Period	Preliminary Screening Concentration ( $\mu\text{g}/\text{m}^3$ )	Significant Monitoring Concentration ( $\mu\text{g}/\text{m}^3$ )	Current Monitored Background Concentration ( $\mu\text{g}/\text{m}^3$ )	Level of Significant Impact ( $\mu\text{g}/\text{m}^3$ )	Maximum Modeled Concentration ( $\mu\text{g}/\text{m}^3$ )	Modeled + Background Concentration ( $\mu\text{g}/\text{m}^3$ )	NAAQS ( $\mu\text{g}/\text{m}^3$ )	Modeled PSD Increment Consumption ( $\mu\text{g}/\text{m}^3$ )	Allowable Class II PSD Increment ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	24-hour	23.2	10	52	5	336.4	388.4	150	24.8	30
SO <sub>2</sub>	3-hour	128.6	-	154.6	25	1538.6	1693.2	1300	98.3	512
	24-hour	38.9	13	49.8	5	581.0	630.8	365	37.9	91
	Annual	8.8	-	10.5	1	78.7	88.5	80	9.1	20
NO <sub>x</sub>	Annual	3.6	14	9.4	1	50.8	60.2	100	3.4	25
CO	1-hour	1194.4	-	NA	2000	NA	NA	40,000	NA	-
	8-hour	475.7	575	NA	500	NA	NA	10,000	NA	-

NR = Not required

A Class I area impact analysis was performed to determine the affect of this proposed project on the Breton Class I Area. This Class I area is located approximately 187 kilometers from the Nucor Steel Louisiana Facility.

The protocol for the Class I area impact analysis is being reviewed by the Federal Land Manager of the Caney Creek Wilderness Area and the Department. Initial comments from the review were incorporated and the protocol was approved by the Federal Land Manager and the Department. The Class I area impact analysis included air quality impact, deposition impact, and visibility impairment

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analyses. The results of these analyses showed an insignificant impact on air quality. None of the modeled pollutants exceeded their respective significance impact levels. The deposition flux was estimated to be below significant threshold levels for both nitrogen and sulfur. The visibility impairment was modeled to be less than five (5) percent in all 24-hour periods. As a result of this analysis, there was no predicted adverse impact on air quality or visibility and no adverse impact as a result of deposition.

Pollutant	Time Period	Calculated Maximum Ground Level Concentration (Nucor plus Background)	Calculated Maximum Ground Level Concentration (Nucor Contribution)	National Ambient Air Quality Standard (NAAQS)
PM <sub>10</sub>	24 - hour	388.4 $\mu\text{g}/\text{m}^3$	3.14 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$
SO <sub>2</sub>	3 -hour	1693.2 $\mu\text{g}/\text{m}^3$	14.4 $\mu\text{g}/\text{m}^3$	1,300 $\mu\text{g}/\text{m}^3$
SO <sub>2</sub>	24 - hour	630.8 $\mu\text{g}/\text{m}^3$	4.72 $\mu\text{g}/\text{m}^3$	365 $\mu\text{g}/\text{m}^3$
SO <sub>2</sub>	Annual	88.5 $\mu\text{g}/\text{m}^3$	0.18 $\mu\text{g}/\text{m}^3$	80 $\mu\text{g}/\text{m}^3$
NO <sub>x</sub>	Annual	50.8 $\mu\text{g}/\text{m}^3$	-	100 $\mu\text{g}/\text{m}^3$
CO*	1-hr	1194.4 $\mu\text{g}/\text{m}^3$	-	40,000 $\mu\text{g}/\text{m}^3$
CO*	8-hr	475.7 $\mu\text{g}/\text{m}^3$	-	10,000 $\mu\text{g}/\text{m}^3$

\*Preliminary Screening Concentration.

#### PSD INCREMENT ANALYSIS

Because the maximum modeled PM<sub>10</sub> and SO<sub>2</sub> impacts for Class I modeling exceeded their PSD significance level, a determination of PSD increment consumption was required. Modeling demonstrates compliance with the allowable Class I and Class II PSD increment limit for PM<sub>10</sub> and SO<sub>2</sub>.

Dispersion Model(s) Used: CALPUFF

Pollutant	Averaging Period	Class I PSD Increment	Modeled Class I Increment**	Class II PSD Increment	Modeled Class II Increment
PM <sub>10</sub>	24 - hour	8 $\mu\text{g}/\text{m}^3$	0.23 $\mu\text{g}/\text{m}^3$	30 $\mu\text{g}/\text{m}^3$	24.8
SO <sub>2</sub>	3 -hour	25 $\mu\text{g}/\text{m}^3$	***272.4 $\mu\text{g}/\text{m}^3$	512 $\mu\text{g}/\text{m}^3$	98.3
SO <sub>2</sub>	24 - hour	5 $\mu\text{g}/\text{m}^3$	***88.8 $\mu\text{g}/\text{m}^3$	91 $\mu\text{g}/\text{m}^3$	37.9
SO <sub>2</sub>	Annual	2 $\mu\text{g}/\text{m}^3$	0.010 $\mu\text{g}/\text{m}^3$	20 $\mu\text{g}/\text{m}^3$	9.1
NO <sub>x</sub>	Annual	2.5 $\mu\text{g}/\text{m}^3$	0.0053 $\mu\text{g}/\text{m}^3$	25 $\mu\text{g}/\text{m}^3$	3.4

\*\* The PM<sub>10</sub>, SO<sub>2</sub> annual and the NO<sub>x</sub> annual preliminary screening values were below the PSD Increment Significance Levels

\*\*\*Nucor's contribution to the SO<sub>2</sub> 24-hr and 3-hr increment is 0.013  $\mu\text{g}/\text{m}^3$  which is below the PSD Increment Significance Level demonstrating that Nucor will not significantly impact Class I increment.

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### **General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. A list of approved General Condition XVII Activities has not been submitted at this time and therefore the proposed permit will need to be modified prior to operation to review and include any identified General Condition XVII Activities.

### **Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. A list of approved Insignificant Activities has not been submitted at this time and therefore the proposed permit will need to be modified prior to operation to review and include any identified Insignificant Activities.

### **V. PERMIT SHIELD**

Per 40 CFR 70.6(f) and LAC 33:III.507.I, a permit shield has been determined for the proposed permit.

Emissions Source	Proposes to be Shielded From ...	... by compliance with ...	Was the Permit Shield Granted?
Coke Oven Charging	<ul style="list-style-type: none"> <li>• Subpart L [40 CFR 63.303(d)(2)]</li> </ul>	BACT for Coke Oven Charging. (BACT is determined to be Flat Car Charging – of Compacted Coke)	Yes

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**VI. PERIODIC MONITORING (Containing NSPS, NESHAP, Compliance Assurance Monitoring (CAM) and Periodic Monitoring requirements)**

Source	Monitor	Method	Citation
ARE001 Coke Ovens Coal Handling, Crushing, and Compacting	Filter Vent Visible Emissions Stack Emissions	By Daily Observation New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Every 5 years	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
CRG002 Common Requirements for Power Boiler	Baghouse Equipment Condition Oxygen or Carbon dioxides emissions Nitrogen oxides Stack Emissions	Inspect using technically sound method semiannually By Continuous Monitoring System (CMSs) By Continuous Monitoring System (CMSs) New Source Performance Standards, 40 CFR 60, Appendix A, Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources; Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources; and Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Every 5 years	LAC 33:III.507.H.1.a 40 CFR 60.48(b)(1) 40 CFR 60.48(b)(1) LAC 33:III.507.H.1.a
EQT001 Coke Battery 1 Coal Charging	Visible Emissions	By Daily Observation during Charging	40 CFR 60.303(d)3
EQT003 Coke Battery 1 Coke Quench Tower	Equipment Condition	Technically sound method monthly, Inspect each quench tower for damaged or missing baffles and blockage	[40 CFR 63.7295(b)(3)]
EQT004 COK-104 - Coke Battery 1 Coke Handling	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT005 Coke Battery 1 FGD Lime Silo Unloading	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT006 Coke Battery 1 FGD Waste Loading	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT007 Coke Battery 2 Coal Charging	Visible Emissions	By Daily Observation during Charging	40 CFR 60.303(d)3
EQT009 Coke Battery 2 Coke Quench Tower	Equipment Condition	Technically sound method monthly, Inspect each quench tower for damaged or missing baffles and blockage	[40 CFR 63.7295(b)(3)]

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Source	Monitor	Method	Citation
EQT010 COK-204 - Coke Battery 2 Coke Handling	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT011 Coke Battery 2 FGD Lime Silo Unloading	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT012 Coke Battery 2 FGD Waste Loading	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT013 Coke Bin Tower	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT014 Coke Screening	Baghouse Equipment Condition Filter Vent Visible Emissions Stack Emissions	Inspect using technically sound method semiannually By Daily Observation New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT015 Cast House 1 Baghouse Vent	Equipment Condition – Capture System Equipment Condition – Hoppers	Visual Inspection every 24 hrs, verify that each damper is in the same position as during the initial performance test Visual Inspection weekly, Confirm that dust is being removed from hoppers	40 CFR 63.7830(a)(1) 40 CFR 63.7830(b)(4)(Xii)
	Equipment Condition – Bag Cleaning Mechanism	Visual Inspection Monthly	40 CFR 63.7830(b)(4)(v)
	Equipment Condition – Reverse air and shaker-type baghouses	Visual Inspection monthly, Check bag tension	40 CFR 63.7830(b)(4)(vi)
	Equipment Condition - Fans	Visual Inspection quarterly, Inspect fans for wear, material buildup, and corrosion	40 CFR 63.7830(b)(4)(viii)
	Flow rate – through each separately ducted hood	Flow rate monitoring device	40 CFR 63.7830(a)(2)
	Opacity	Continuous Opacity Monitor (COM's)	40 CFR 63.7830(b)(2)
	Baghouse Equipment Condition	Visual Inspection quarterly, Inspect the baghouse interior for air leaks	40 CFR 63.7830(b)(4)(vii)

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<b>Source</b>	<b>Monitor</b>	<b>Method</b>	<b>Citation</b>
EQT015 Cast House 1 Baghouse Vent	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources; Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources; and Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years	LAC 33:III.507.H.1.a
	Pressure Drop	Pressure Drop Instrument, daily	40 CFR 63.7830(b)(4)(i)
EQT016 Cast House 2 Baghouse Vent	Equipment Condition – Capture System	Visual Inspection every 24 hrs, verify that each damper is in the same position as during the initial performance test	40 CFR 63.7830(a)(1)
	Equipment Condition – Hoppers	Visual Inspection weekly, Confirm that dust is being removed from hoppers	40 CFR 63.7830(b)(4)(ii)
	Equipment Condition – Bag Cleaning	Visual Inspection Monthly	40 CFR 63.7830(b)(4)(v)
	Equipment Condition – Reverse air and Mechanism	Visual Inspection monthly, Check bag tension	40 CFR 63.7830(b)(4)(vi)
	Equipment Condition – Reverse air and shaker-type baghouses	Visual Inspection quarterly, Inspect fans for wear, material buildup, and corrosion	40 CFR 63.7830(b)(4)(vii)
	Equipment Condition – Fans	Flow rate monitoring device	40 CFR 63.7830(a)(2)
	Flow rate – through each separately ducted hood	Continuous Opacity Monitor - COM's	40 CFR 63.7830(b)(2)
	Opacity	Visual Inspection quarterly, Inspect the baghouse interior for air leaks	40 CFR 63.7830(b)(4)(vii)
	Baghouse Equipment Condition		
	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources; Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources; and Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years	
	Pressure Drop	Pressure Drop Instrument, daily	40 CFR 63.7830(b)(4)(i)
	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
EQT021 Pig Iron Desulfurization Station Baghouse Vent	Filter Vent Visible Emissions	By Daily Observation	LAC 33:III.507.H.1.a
	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years	LAC 33:III.507.H.1.a

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Source	Monitor	Method	Citation
EQT022 PIG-102 - Pig Iron Solidification Baghouse Vent	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33.III.507.H.1.a LAC 33.III.507.H.1.a
EQT031 Sinter Flue Gas Scrubber Stack	Equipment Condition – Hoppers	Visual Inspection weekly, Confirm that dust is being removed from hoppers	40 CFR 63.7830(b)(4)(ii)
EQT031 Sinter Flue Gas Scrubber Stack	Equipment Condition – Bag Cleaning Mechanism	Visual Inspection Monthly	40 CFR 63.7830(b)(4)(v)
EQT031 Sinter Flue Gas Scrubber Stack	Equipment Condition – Reverse air and shaker-type baghouses	Visual Inspection monthly, Check bag tension	40 CFR 63.7830(b)(4)(vi)
EQT031 Sinter Flue Gas Scrubber Stack	Equipment Condition – Fans	Visual Inspection quarterly, Inspect fans for wear, material buildup, and corrosion	40 CFR 63.7830(b)(4)(viii)
EQT032 Sinter Strand Baghouse	Baghouse Equipment Condition Pressure Drop Stack Emissions	Visual Inspection quarterly, Inspect baghouse interior for air leaks Pressure Drop Instrument, daily New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources; Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources; Method 25A - Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer; Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources; and Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years	40 CFR 63.7830(b)(4)(vii) 40 CFR 63.7830(b)(4)(i) LAC 33.III.507.H.1.a
EQT032 Sinter Strand Baghouse	Equipment Condition – Capture System	Visual Inspection every 24 hrs, verify that each damper is in the same position as during the initial performance test	40 CFR 63.7830(a)(1)
EQT032 Sinter Strand Baghouse	Equipment Condition – Hoppers	Visual Inspection weekly, Confirm that dust is being removed from hoppers	40 CFR 63.7830(b)(4)(ii)
EQT032 Sinter Strand Baghouse	Equipment Condition – Bag Cleaning Mechanism	Visual Inspection Monthly	40 CFR 63.7830(b)(4)(v)
EQT032 Sinter Strand Baghouse	Equipment Condition – Reverse air and shaker-type baghouses	Visual Inspection monthly, Check bag tension	40 CFR 63.7830(b)(4)(vi)
EQT032 Sinter Strand Baghouse	Flow rate – through each separately ducted hood	Visual Inspection quarterly, Inspect fans for wear, material buildup, and corrosion Flow rate monitoring device	40 CFR 63.7830(b)(4)(viii) 40 CFR 63.7830(a)(2)

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Source	Monitor	Method	Citation
EQT033 Sinter Cooler	Pressure Drop Baghouse Equipment Condition Stack Emissions	Pressure Drop Instrument, daily Visual Inspection quarterly, Inspect the baghouse interior for air leaks	40 CFR 63.7830(b)(4)(i) 40 CFR 63.7830(b)(4)(vii)
EQT033 Sinter Cooler	Pressure Drop Baghouse Equipment Condition Filter Vent Visible Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT034 Sinter FGD Lime Silo Unloading	Baghouse Equipment Condition Filter Vent Visible Emissions	Pressure Drop Instrument, daily By Daily Observation	40 CFR 63.7830(b)(4)(i) LAC 33:III.507.H.1.a
EQT035 Sinter FGD Lime Waste Loading	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT041 Air-cooled Slag Processing Primary Crusher	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT042 Air-cooled Slag Processing Primary Screening	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT043 Air-cooled Slag Processing Secondary Crusher	Baghouse Equipment Condition Filter Vent-Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT044 Air-cooled Slag Processing Secondary Screen	Baghouse Equipment Condition Pressure Drop Opacity	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT046 Slag Mill Dryer Baghouse Vent	Visible Emissions Stack Emissions	40 CFR 60, Appendix A, Method 9 upon occurrence of event of observing visible emissions 40 CFR 60, Appendix A, Method 22, daily New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially	40 CFR 64.6(c)(1) LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a

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<b>Source</b>	<b>Monitor</b>	<b>Method</b>	<b>Citation</b>
EQT047 Slag Mill Dry Slag Feed Bin Baghouse Vent	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
	Filter Vent Visible Emissions	By Daily Observation	LAC 33:III.507.H.1.a
EQT048 Slag Mill Crushers/Screener Baghouse Vent	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
	Filter Vent Visible Emissions	By Daily Observation	LAC 33:III.507.H.1.a
EQT049 Slag Mill Building Baghouse Vent	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
	Pressure Drop	Pressure Drop Instrument, daily	40 CFR 64.6(c)(1)
EQT049 Slag Mill Building Baghouse Vent	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources. Initially and every five years	LAC 33:III.507.H.1.a
	Opacity	40 CFR 60, Appendix A, Method 9 upon occurrence of event of observing visible emissions	40 CFR 64.6(c)(1)
EQT050 Slag Mill Transfer Points Baghouse Vent	Visible Emissions	40 CFR 60, Appendix A, Method 22,daily	LAC 33:III.507.H.1.a
EQT051 Slag Mill Product Silo Baghouse Vent	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
	Filter Vent Visible Emissions	By Daily Observation	LAC 33:III.507.H.1.a
EQT051 Slag Mill Product Silo Baghouse Vent	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
	Pressure Drop	Pressure Drop Instrument, daily	40 CFR 64.6(c)(1)
EQT052 Slag Mill Loading Collector Baghouse Vent	Opacity	40 CFR 60, Appendix A, Method 9 upon occurrence of event of observing visible emissions	40 CFR 64.6(c)(1)
	Visible Emissions	40 CFR 60, Appendix A, Method 22,daily	LAC 33:III.507.H.1.a
EQT053 Stock House 1 Baghouse Vent	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially	LAC 33:III.507.H.1.a
	Baghouse Equipment Condition	Inspect using technically sound method semiannually	LAC 33:III.507.H.1.a
	Filter Vent Visible Emissions	By Daily Observation	LAC 33:III.507.H.1.a

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<b>Source</b>	<b>Monitor</b>	<b>Method</b>	<b>Citation</b>
EQT054 Stock House 2 Baghouse Vent	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
EQT055 Blast Furnace 1 Toggas Flare Pilot	Presence of a Flame	Presence of a flame monitored continuously by heat sensing device	LAC 33:III.507.H.1.a
EQT056 Blast Furnace 2 Toggas Flare Pilot	Presence of a Flame	Presence of a flame monitored continuously by heat sensing device	LAC 33:III.507.H.1.a
FUG009 Sinter Building Fugitives	Opacity	Opacity monitored by continuous opacity monitor (CCM) continuously. Technically sound method	40 CFR 63.7833(a) LAC 33:III.501.C.6
GRP004 Slag Granulator 1 Cap	Slag Mass	Technically sound method	LAC 33:III.501.C.6
GRP005 Diverted Slag Pits 1 Cap	Diverted Slag Mass	Technically sound method	LAC 33:III.501.C.6
GRP006 Slag Granulator 2 Cap	Slag Mass	Technically sound method	LAC 33:III.501.C.6
GRP007 Diverted Slag Pits 2 Cap	Diverted Slag Mass	Technically sound method	LAC 33:III.501.C.6
PCS002 Coke Battery Process Group	Collecting Main Coke Battery Pressure	Presence of a leak monitored by 40 CFR 63, Method 303 daily. Pressure monitored by pressure instrument daily for each day of operation. Monitor the pressure in each oven or in a common battery tunnel to ensure that the ovens are operated under a negative pressure.	40 CFR 63.308(a) 40 CFR 63.303(b)(1)(ii)
RLP006, RLP012 Coke Battery 1 Flue Gas Desulfurization Stack	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources; Method 10 -- Determination of Carbon Monoxide Emissions from Stationary Sources; Method 25A - Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer; Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources; and Method 5 - Determination of Particulate Matter Emissions from Stationary Sources, Initially and every five years	LAC 33:III.507.H.1.a
RLP013 PC Mill Vent	Baghouse Equipment Condition Filter Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a

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<b>Source</b>	<b>Monitor</b>	<b>Method</b>	<b>Citation</b>
RLP013 PCI Mill Vent	Temperature	Temperature monitored by temperature monitoring device continuously. Monitor the temperature of the gas stream at the exit of the thermal dryer.	40 CFR 60.253(a)(1) LAC 33:III.507.H.1.a
Stack Emissions		New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources; Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources. Initially and every five years	
RLP014 Slag Mill Dryer Stack	Baghouse Equipment Condition Filler Vent Visible Emissions	Inspect using technically sound method semiannually By Daily Observation	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
RLP015, RLP016 STV-101-Blast Furnace 1 Hot Blast Stoves Common Stack, STV-201-Blast Furnace 2 Hot Blast Stoves Common Stack	Scrubber Flow Cyclone vents	Scrubber Flow rate monitored by flow rate monitoring device once every four hours. Equipment/operational data monitored by technically sound method upon each occurrence of process unit shut down or whenever visible emission checks indicate maintenance may be necessary. Perform maintenance as necessary.	LAC 33:III.507.H.1.a LAC 33:III.507.H.1.a
RLP015, RLP016 STV-101-Blast Furnace 1 Hot Blast Stoves Common Stack, STV-201-Blast Furnace 2 Hot Blast Stoves Common Stack	Stack Emissions	New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources; Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources; Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources, and Method 5 - Determination of Particulate Matter Emissions from Stationary Sources. Initially and every five years	LAC 33:III.507.H.1.a

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**VII. GLOSSARY**

**Carbon Monoxide (CO)** – A colorless, odorless gas, which is an oxide of carbon.

**Maximum Achievable Control Technology (MACT)** – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

**Hydrogen Sulfide (H<sub>2</sub>S)** – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

**New Source Review (NSR)** – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

**Nitrogen Oxides (NO<sub>x</sub>)** – Compounds whose molecules consist of nitrogen and oxygen.

**Organic Compound** – Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

**Part 70 Operating Permit** – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

**PM<sub>10</sub>** – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

**Potential to Emit (PTE)** – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

**Prevention of Significant Deterioration (PSD)** – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air

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Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide ( $\text{SO}_2$ ) – An oxide of sulfur.

Sulfuric Acid ( $\text{H}_2\text{SO}_4$ ) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.